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Shoji Kodama

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EXAMINER

LEWIS, ALICIA M

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/802,853	KODAMA, SHOJI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Alicia M. Lewis	2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 13, 17, 18 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13, 17, 18 and 21-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This office action is responsive to communication filed on June 8, 2009. Claims 13, 17, 18 and 21-24 are presently amended, and claims 1-12, 14-16, 19, 20, and 25-35 are canceled. Therefore, claims 13, 17, 18, and 21-24 remain pending in this application.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13, 17 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoogterp (US Patent Application Publication 2005/0210218 A1) in view of Yamamoto (US Patent Application Publication 2002/0152339 A1), and further in view of Chris Lueth, "WORM Storage on Magnetic Disks Using SnapLock Compliance and SnapLock Enterprise," (published September 2003) ('Lueth').

With respect to claim 13, Hoogterp teaches a storage system for protecting data on a physical volume at the file system level and permitting access to the data at the physical volume level comprising:

a network attached storage (NAS) gateway (Figure 4, paragraphs 27 and 52);  
and

a storage system which is coupled to a plurality of servers both through said NAS gateway (Figure 4, paragraphs 52 and 55) and not through said NAS gateway (Figures 1-3, paragraphs 23-26 and 48-49),

wherein said NAS gateway comprises:

a first interface for file level I/O (element 168 in Figure 4, paragraph 52);

a third interface for block level I/O (element 169 in Figure 4, paragraphs 52-54), and

a first controller which processes file level I/O requests (paragraph 56);

wherein said storage system comprises:

a second interface for block level I/O, said second interface being  
connected to said third interface (paragraph 34),

a plurality of physical volumes upon which file systems are represented  
(paragraphs 58 and 62);

a second controller which processes block level I/O requests (paragraph  
34);

wherein once a particular logical volume is protected, write requests to the  
particular logical volume or physical volume of the particular logical volume via either  
the first or second controller are not permitted until expiration of the specified period of  
time (paragraph 150),

storing status information in a NAS gateway (paragraph 102);

wherein if said NAS gateway receives a file system protect request against a particular file system, via said third interface, said first controller changes a volume status among said plurality of entries indicating statuses of said particular file system to restrict access (paragraphs 101-102),

wherein if said NAS gateway receives a file system permit request against said particular file system, via said third interface, said first controller changes a volume status among said plurality of entries indicating statuses of said particular file system to permit access if the specified period of time has expired for said volume (paragraphs 101-102), and

wherein when said storage system receives an access from a server other than through said NAS gateway, said storage system processes the access if said status of the corresponding volume is not protected (paragraphs 101-102).

*The Examiner would like to note that the last three limitations contain “if” and “when” statements, which render the limitations optionally patentable because the limitations only occur if/when another limitation occurs. For example, if said NAS gateway does not receive a file system protect request, said first controller does not change a volume status; if said NAS gateway does not receive a file system permit request, said first controller does not change a volume status table; if said storage system does not receive an access from a server other than through said NAS gateway, said storage system does not process the access; and lastly, if said status of the corresponding volume is not protected, said storage system does not process the access. In giving the claim its broadest reasonable interpretation, the Examiner*

*considers instances when the preceding/required condition does not occur, and thus the limitations do not have to occur.*

Hoogterp does not explicitly teach wherein, in response to a file system protect request directed to a particular file system with a specified period of time, the particular file system is protected for the specified period of time and a physical volume of the particular file system is also protected for the specified period of time; wherein once a particular file system is protected, write requests to the particular file system or physical volume of the particular file system via either the first or second controller are not permitted until expiration of the specified period of time; where information regarding whether or not the particular file system is protected is stored in a volume status table having a plurality of entries which indicate statuses of the particular said file system; or where said volume status table is stored in both NAS gateway and said storage system.

Yamamoto teaches a direct access storage system with combined block interface and file interface access (see abstract), in which he teaches:

- a first interface for file level input/output (I/O) (paragraph 18 lines 1-5);
- a second interface for block level I/O (paragraph 18 lines 1-4);
- a plurality of physical volumes upon which file systems are represented (paragraphs 7-8, paragraphs 43-44);
- a first controller which processes file level I/O requests (paragraph 7 lines 4-7 and 13-16); and

a second controller which processes block level I/O requests (paragraph 7 lines 4-5 and 13-16),

wherein, in response to a file system protect request directed to a particular file system, the particular file system is protected for a specified period of time and a physical volume of the particular file system is also protected for the specified period of time (paragraph 6, paragraph 7 lines 13-16, paragraph 35, paragraph 39), and

wherein once the particular file system is protected, write requests to the particular file system or physical volume of the particular file system via either the first or second controller are not permitted until expiration of the specified period of time (paragraphs 35, 39 and 47),

wherein information regarding whether or not the particular file system is protected is stored in a volume status table having a plurality of entries which indicate statuses of the particular file system (Figures 5 and 6, paragraphs 43, 45 and 47), and

wherein said volume status table is stored in both said NAS gateway (Hoogterp, paragraph 102) and said storage system (Figures 5 and 6, paragraphs 43, 45 and 47) *(Hoogterp teaches storing status information in a NAS gateway and Yamamoto teaches storing a volume status table in a storage system. Furthermore, it is obvious that information, including a status table, may be stored in two different locations).*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hoogterp by the teaching of Yamamoto because wherein said first and second controllers share protection information for said logical and physical volumes would enable a storage system with direct access storage

devices that could be shared between a block interface and a file interface (Yamamoto, paragraph 6).

Further regarding claim 13, the combination of Hoogterp and Yamamoto does not teach a protect request directed to a file system with a specified period of time or wherein said entries include a first status indicating a retention period for the particular file system, the retention period indicating how long data in the particular file system should remain unchanged and thereby determining when data can next be written to the particular file system.

Lueth teaches WORM Storage on Magnetic Disks Using SnapLock Compliance and SnapLock Enterprise (see abstract), in which he teaches a protect request directed to a file system with a specified period of time (page 10, *Using Retention Dates with SnapLock Compliance* and Section 3.4.1); and a retention period for the particular file system, the retention period indicating how long data in the particular file system should remain unchanged and thereby determining when data can next be written to the particular file system (page 10, *Using Retention Dates with SnapLock Compliance* and Sections 3.4.1 and 3.4.2).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Hoogterp by the teaching of Lueth because a protect request directed to a file system with a specified period of time and wherein said entries include a first status indicating a retention period for the particular file system, the retention period indicating how long data in the particular file system



should remain unchanged and thereby determining when data can next be written to the particular file system would enable usage of WORM data storage to meet regulatory compliance and to add another layer to a business's data protection roadmap (Lueth, abstract).

With respect to claim 17, Hoogterp as modified teaches wherein said entries indicate a second status of each file system defining whether the file system is protected or unprotected (Yamamoto, paragraph 47).

With respect to claim 24, Hoogterp as modified teaches wherein said second interface is a Fibre Channel interface which processes block level I/O requests (Hoogterp, paragraph 34).

3. Claims 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoogterp (US Patent Application Publication 2005/0210218 A1) in view of Yamamoto (US Patent Application Publication 2002/0152339 A1) and Chris Lueth, "WORM Storage on Magnetic Disks Using SnapLock Compliance and SnapLock Enterprise," (published September 2003) ('Lueth'), as applied to claims 13, 17 and 24 above, and further in view of Brewer et al. (US Patent 6,336,163 B1) ('Brewer').

With respect to claim 18, Hoogterp as modified teaches claim 13.

Hoogterp as modified does not teach a second status of each file system defining whether the file system is exported or un-exported (Brewer, column 2 lines 56-60, column 6 lines 24-26).

Brewer teaches a method and article of manufacture for inserting volumes for import into a virtual tape server (see abstract), in which he teaches wherein said entries indicate a second status of each volume defining whether the volume is exported or un-exported (Brewer, column 2 lines 56-60, column 6 lines 24-26).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Hoogterp by the teaching of Brewer because a second status of each volume defining whether the file system is exported or un-exported would enable a more detailed tracking of all types of volumes, not just file systems, which would add functionality to Hoogterp's system (Brewer, column 6 lines 1-3).

4. Claims 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoogterp (US Patent Application Publication 2005/0210218 A1) in view of Yamamoto (US Patent Application Publication 2002/0152339 A1) and Chris Lueth, "WORM Storage on Magnetic Disks Using SnapLock Compliance and SnapLock Enterprise," (published September 2003) ('Lueth'), as applied to claims 13, 17 and 24 above, and further in view of Achiwa et al. (US Patent Application Publication 2003/0009438 A1) ('Achiwa').

With respect to claim 21, Hoogterp as modified teaches wherein in response to said file system protect request, said first controller sets the information corresponding to said specified period of time to said particular file system and sets the information corresponding to said specified period of time to said physical volume of said particular file system (Yamamoto, paragraph 6, paragraph 7 lines 13-16, paragraph 35, paragraph 39; Lueth, Lueth, page 10, *Using Retention Dates with SnapLock Compliance* and Sections 3.4.1 and 3.4.2).

Hoogterp as modified does not teach wherein said first controller is a network attached storage controller which processes file level I/O requests.

Achiwa teaches a method for file level remote copy of a storage device (see abstract) in which he teaches wherein said first controller is a network attached storage controller which processes file level I/O requests (paragraph 38).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Hoogterp by the teaching of Achiwa because wherein said first controller is a network attached storage controller which processes file level I/O requests would enable processing of file or directory level access requests (Achiwa, paragraph 8).

With respect to claim 23, Hoogterp as modified teaches wherein said first interface is an Ethernet interface which processes file level I/O requests (Achiwa, paragraph 96).

5. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoogterp (US Patent Application Publication 2005/0210218 A1) in view of Yamamoto (US Patent Application Publication 2002/0152339 A1), Chris Lueth, "WORM Storage on Magnetic Disks Using SnapLock Compliance and SnapLock Enterprise," (published September 2003) ('Lueth') and Achiwa et al. (US Patent Application Publication 2003/0009438 A1) ('Achiwa'), as applied to claims 21 and 23 above, and further in view of Reynolds (US 2002/0055942 A1).

With respect to claim 22, Hoogterp as modified teaches wherein said second controller is a disk controller which processes block level I/O requests (Achiwa, paragraph 93), and wherein in response to a file system delete request, said first controller checks a status of a specified file system and statuses of each corresponding physical volume of said file system (Yamamoto, paragraph 45; Lueth, page 10, Sections 3.4.1 and 3.4.2).

Hoogterp as modified does not teach, if a shredding is required said first controller deletes all the data on each corresponding physical volume by shredding, and if a shredding is not required said first controller places each corresponding physical volume to a free volume pool.

Reynolds teaches creating, verifying, managing, and using original digital files (see abstract), in which he teaches if a shredding is required said first controller deletes all the data on each corresponding physical volume by shredding, and if a shredding is

not required said first controller places each corresponding physical volume to a free volume pool (paragraph 60).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Hoogterp by the teaching of Reynolds because if a shredding is required said first controller deletes all the data on each corresponding physical volume by shredding, and if a shredding is not required said first controller places each corresponding physical volume to a free volume pool would enable secure deletion of secure data files (Reynolds, paragraph 60).

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoogterp (US Patent Application Publication 2005/0210218 A1) in view of Yamamoto (US Patent Application Publication 2002/0152339 A1), and further in view of Stakutis et al. (US 2006/0282484 A1) ('Stakutis').

With respect to claim 13, Hoogterp teaches a storage system for protecting data on a physical volume at the file system level and permitting access to the data at the physical volume level comprising:

a network attached storage (NAS) gateway (Figure 4, paragraphs 27 and 52);  
and

a storage system which is coupled to a plurality of servers both through said NAS gateway (Figure 4, paragraphs 52 and 55) and not through said NAS gateway (Figures 1-3, paragraphs 23-26 and 48-49),

wherein said NAS gateway comprises:

a first interface for file level I/O (element 168 in Figure 4, paragraph 52);

a third interface for block level I/O (element 169 in Figure 4, paragraphs 52-54), and

a first controller which processes file level I/O requests (paragraph 56);

wherein said storage system comprises:

a second interface for block level I/O, said second interface being connected to said third interface (paragraph 34),

a plurality of physical volumes upon which file systems are represented (paragraphs 58 and 62);

a second controller which processes block level I/O requests (paragraph 34); and

wherein once a particular logical volume is protected, write requests to the particular logical volume or physical volume of the particular logical volume via either the first or second controller are not permitted until expiration of the specified period of time (paragraph 150).

storing status information in a NAS gateway (paragraph 102);

wherein if said NAS gateway receives a file system protect request against a particular file system, via said third interface, said first controller changes a volume status among said plurality of entries indicating statuses of said particular file system to restrict access (paragraphs 101-102),

wherein if said NAS gateway receives a file system permit request against said particular file system, via said third interface, said first controller changes a volume status among said plurality of entries indicating statuses of said particular file system to permit access if the specified period of time has expired for said volume (paragraphs 101-102), and

wherein when said storage system receives an access from a server other than through said NAS gateway, said storage system processes the access if said status of the corresponding volume is not protected (paragraphs 101-102).

*The Examiner would like to note that the last three limitations contain “if” and “when” statements, which render the limitations optionally patentable because the limitations only occur if/when another limitation occurs. For example, if said NAS gateway does not receive a file system protect request, said first controller does not change a volume status; if said NAS gateway does not receive a file system permit request, said first controller does not change a volume status table; if said storage system does not receive an access from a server other than through said NAS gateway, said storage system does not process the access; and lastly, if said status of the corresponding volume is not protected, said storage system does not process the access. In giving the claim its broadest reasonable interpretation, the Examiner considers instances when the preceding/required condition does not occur, and thus the limitations do not have to occur.*

Hoogterp does not explicitly teach wherein, in response to a file system protect request directed to a particular file system with a specified period of time, the particular file system is protected for the specified period of time and a physical volume of the particular file system is also protected for the specified period of time; wherein once a particular file system is protected, write requests to the particular file system or physical volume of the particular file system via either the first or second controller are not permitted until expiration of the specified period of time; where information regarding whether or not the particular file system is protected is stored in a volume status table having a plurality of entries which indicate statuses of the particular said file system; or where said volume status table is stored in both NAS gateway and said storage system.

Yamamoto teaches a direct access storage system with combined block interface and file interface access (see abstract), in which he teaches:

- a first interface for file level input/output (I/O) (paragraph 18 lines 1-5);
- a second interface for block level I/O (paragraph 18 lines 1-4);
- a plurality of physical volumes upon which file systems are represented (paragraphs 7-8, paragraphs 43-44);
- a first controller which processes file level I/O requests (paragraph 7 lines 4-7 and 13-16); and
- a second controller which processes block level I/O requests (paragraph 7 lines 4-5 and 13-16),



wherein, in response to a file system protect request directed to a particular file system, the particular file system is protected for a specified period of time and a physical volume of the particular file system is also protected for the specified period of time (paragraph 6, paragraph 7 lines 13-16, paragraph 35, paragraph 39), and

wherein once the particular file system is protected, write requests to the particular file system or physical volume of the particular file system via either the first or second controller are not permitted until expiration of the specified period of time (paragraphs 35, 39 and 47),

wherein information regarding whether or not the particular file system is protected is stored in a volume status table having a plurality of entries which indicate statuses of the particular file system (Figures 5 and 6, paragraphs 43, 45 and 47), and

wherein said volume status table is stored in both said NAS gateway (Hoogterp, paragraph 102) and said storage system (Figures 5 and 6, paragraphs 43, 45 and 47) *(Hoogterp teaches storing status information in a NAS gateway and Yamamoto teaches storing a volume status table in a storage system. Furthermore, it is obvious that information, including a status table, may be stored in two different locations).*

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hoogterp by the teaching of Yamamoto because wherein said first and second controllers share protection information for said logical and physical volumes would enable a storage system with direct access storage

devices that could be shared between a block interface and a file interface (Yamamoto, paragraph 6).

Further regarding claim 13, the combination of Hoogterp and Yamamoto does not teach a protect request directed to a file system with a specified period of time or wherein said entries include a first status indicating a retention period for the particular file system, the retention period indicating how long data in the particular file system should remain unchanged and thereby determining when data can next be written to the particular file system.

Stakutis teaches a method, system and program for archiving files (see abstract), in which he teaches a protect request directed to a file system with a specified period of time (paragraphs 22-24); and a retention period for the particular file system, the retention period indicating how long data in the particular file system should remain unchanged and thereby determining when data can next be written to the particular file system (paragraph 22).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Hoogterp by the teaching of Stakutis because a protect request directed to a file system with a specified period of time and wherein said entries include a first status indicating a retention period for the particular file system, the retention period indicating how long data in the particular file system should remain unchanged and thereby determining when data can next be written to the

particular file system would enable an efficient archival retention policy for a file system (Stakutis, abstract).

7. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoogterp (US Patent Application Publication 2005/0210218 A1) in view of Yamamoto (US Patent Application Publication 2002/0152339 A1), Stakutis et al. (US 2006/0282484 A1) ('Stakutis') and Achiwa et al. (US Patent Application Publication 2003/0009438 A1) ('Achiwa'), and further in view of Reynolds (US 2002/0055942 A1).

With respect to claim 22, Hoogterp in view of Yamamoto and Stakutis teaches and wherein in response to a file system delete request, said first controller checks a status of a specified file system and statuses of each corresponding physical volume of said file system (Stakutis, Figure 4, paragraphs 29-31).

Hoogterp in view of Yamamoto and Stakutis does not teach wherein said second controller is a disk controller which processes block level I/O requests.

Achiwa teaches Achiwa teaches a method for file level remote copy of a storage device (see abstract) in which he teaches wherein said second controller is a disk controller which processes block level I/O requests (paragraph 93).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Hoogterp by the teaching of Achiwa because wherein said second controller is a disk controller which processes block level

I/O requests would enable processing of file or directory level access requests (Achiwa, paragraph 8).

Further regarding claim 22, Hoogterp in view of Yamamoto and Stakutis does not teach, if a shredding is required said first controller deletes all the data on each corresponding physical volume by shredding, and if a shredding is not required said first controller places each corresponding physical volume to a free volume pool.

Reynolds teaches creating, verifying, managing, and using original digital files (see abstract), in which he teaches if a shredding is required said first controller deletes all the data on each corresponding physical volume by shredding, and if a shredding is not required said first controller places each corresponding physical volume to a free volume pool (paragraph 60).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have further modified Hoogterp by the teaching of Reynolds because if a shredding is required said first controller deletes all the data on each corresponding physical volume by shredding, and if a shredding is not required said first controller places each corresponding physical volume to a free volume pool would enable secure deletion of secure data files (Reynolds, paragraph 60).

### ***Response to Arguments***

8. Applicant's arguments filed June 8, 2009 have been fully considered but they are not persuasive. Applicant argues that Hoogterp does not teach a storage system which

is coupled to a plurality of servers through both a NAS gateway and also not through a NAS gateway. Examiner disagrees. Hoogterp teaches that Figs. 1-4 show various computer system/storage architectures (paragraph 22). Figure 4 shows a NAS appliance storage architecture, while Figures 1-3 do not show NAS storage architectures. For example, Figure 1 shows a direct attached storage architecture (paragraph 28), Figure 2 shows an iSCSI storage architecture (paragraph 24), and Figure 3 shows a storage area network configuration (paragraph 26). Thus Hoogterp does disclose a storage system coupled to servers through a NAS gateway and not through a NAS gateway.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2164

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Lewis whose telephone number is 571-272-5599. The examiner can normally be reached on Monday - Friday, 9 - 6:30, alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on 571-272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. M. L./  
Examiner, Art Unit 2164  
October 13, 2009

/Charles Rones/  
Supervisory Patent Examiner, Art Unit 2164